EFFICIENT MULTIPLE PRIORITY LIST MEMORY SYSTEM

ABSTRACT OF THE DISCLOSURE

An efficient memory system to implement a multi - list, multi - priority task management scheme. In one embodiment, a single list which is dynamically partitioned amoung multiple priority levels and effectively implements multiple priority lists. This dynamic re-allocation of memory space available to each priority level is handled using a single write pointer and multiple read pointers. There are as many read pointers as there are desired priority levels. One application is scheduling tasks so that all pending tasks are performed at least n-1 times before any pending task is performed for the nth time. An example of a task that may be scheduled is the retransmission of data in a communication system.